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A LETTER
TO SIR DAVID BREWSTER.

TO THE
NOBLEMEN AND GENTLEMEN
CONSTITUTING
THE BRITISH ASSOCIATION
FOR THE
ADVANCEMENT OF SCIENCE.

GENTLEMEN,

WITH very great respect, I most earnestly beg leave to lay the following considerations before your honorable body.

THE BRITISH ASSOCIATION, combining so vast a proportion of the whole scientific light of the Country, is, I need not say, a Court of National Science. But this involves that it is also a Court of National Honor, in all matters that concern Science. At the same time, As your learned Association has but newly risen above the literary horizon, it is certain that the eyes of all Europe will be upon it, perhaps more intently than at any future epoch, to watch the coming pledges of its high honor, and its being pure from all alloy, of favor, or influence; the existence of which has been a lamentable theme of complaint against all older institutions.

It is at a moment so portentous as this, that an

old votary to science, who shrinks from no scrutiny of any office of his life, but is peculiarly obnoxious to suffering from being isolated and not connected with any scientific body, appeals to your dignity, and justice.

If it shall appear that such an individual has, by a member of your body, and in your presence, and acting under your confidence, been shorn of the labors of a literary life, by a denial of them in the face of the indubitable fact; which denial, coming from so high and accredited an authority as a distinguished member of your Association, amounts to their certain suppression so long as redress be not had; I humbly submit, with all due respect, that the acquiescence of your honorable body in such an act, after it has been duly laid before you for adjudication, would render that act your own: and the sufferer could have no other tribunal justly to look up to; because, your Court alone can take cognizance of a case of scientific labor, or merit.

It would be a disrespect to the British Association, which I am entirely foreign from entertaining, to fear for a moment that the case now laid before them can fail of finding every justice, according to the facts.

I have the honor to subscribe myself,

Gentlemen,

With profound respect,

Your most obedient servant,

JOHN FEARN.

Torrington Square, London.

October 1st, 1832.

AS my writings have been, by the most extraordinary circumstances, continually masked from the eye of my countrymen at large ; it is of vital moment to the present issue that I should in this place adduce some testimonial, as to who, or what, is the person who has thus appealed to the British Association. The following, therefore, I select from a number which, from involving scientific matter, would occupy much greater room.

First.

PROFESSOR STEWART, in his last letter to me, dated August 31, 1820, and which is published in the *Parriana*, after several very flattering expressions, which he attributes to “a penetrating genius” in my first work the *Essay on Consciousness*, (rude out-laws of the desert as, I own, my earliest writings certainly were,) and to the report of “common friends ;”—adds the following conclusion :—“Were we living in the neighbourhood of each other, I should have much pleasure in cultivating your acquaintance, and I have no doubt that we should find many subjects for our conversation,” &c.

Upon this I ask—Would the lofty mind of Professor Stewart have thus uttered the proffer of friendly intercourse, with any man who had announced an attack upon him for *no deeper an offence than* “*not viewing his speculations with a favorable eye*”?—Or, Would he have held out the hand of intimacy to an obtruder, so obtunded to decorum as to have “*attempted his correspondence?*”

Second.

Professor Stewart having, as the last act of his last book, (his *Moral Philosophy*,) deemed it a proud thing to appeal to both the intellectual and the moral approbation of the upright Dr. Parr ; then, in such an exigency as the present, What more fit, or apposite testimonial could I desire, than that of the same venerable person ? Accord-

ingly, therefore, I now quote the concluding passage of the remarks which Dr. Parr wrote upon the fly-leaf of the Essay on Immortality: which remarks (it is requisite to explain here) he penned with express reference to the letter which I had written to him when I sent him the copy in question:—

“ I love Mr. Fearn, and am glad to record my gratitude to him for turning my attention to subjects which I had before seen dimly and confusedly, and for strengthening my belief in a world to come. My general faith has indeed never wavered; but I am accustomed to weigh carefully, and to welcome gladly every additional argument, by which that faith may be confirmed and invigorated.—*S. Parr, Oct. 13, 1814.*”

This concluding passage appears to refer to that preceding remark in which he says—“ he was led to a very original view of the moral world, which in my opinion is better understood and better illustrated by him, than by some of our ablest advocates for a future life.”—And here it is to be observed, the Essay on Immortality is one of my earliest works, *written more than eighteen years since*; and, as Dr. Parr truly says, owed very little to philosophical reading.

It may well be supposed that I am not insensible, nor yet wanting in pride, at such a testimonial, from such a quarter, on such a subject. But it certainly was not brought in here without urgent need. And when the reader shall have gone through the following Letter, I am content that he compare my impudence with Sir David Brewster’s modesty.

N.B.—With regard to the notable controversy concerning the “ *luminous spot* ;” I have omitted, in the body of this Letter, to accord my suffrage in favor of Dr. Wells,—namely—that, in my experience, it *does not move*; although I imagine that *some undue* pressure on the eye might cause such a result.

LETTER TO SIR DAVID BREWSTER .

ON his unfounded assignment of Mr. Fearn's moral, in his correspondence with Professor Stewart ;—ON his exterminating general implications of the whole of Mr. Fearn's philosophical labors, in every department, the tendency of which cannot be doubtful ;—and ON his allegation before the British Association, met at Oxford in June 1832 :—ALONG WITH WHICH is given, a Refutation of Sir David Brewster's optical attack on the Treatise of Cerebral Vision : The whole comprising a Third Supplement to that Treatise.

BY JOHN FEARN, Esq.

LONDON : PUBLISHED BY MESSRS. LONGMAN AND CO.,
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ST. PAUL'S CHURCH-YARD.

Introductory Matter, containing an enumeration of Three extant Schemes of the Nature of Mind, and including a First Refutation of Sir David Brewster's optical objections to Cerebral Vision.

THE subjoined copies, of a letter from me to Sir Anthony Carlisle and of his answer, will in some degree introduce such readers, as are only partially acquainted with the subject, to a notion of the extent and diversity of departments in philosophy, which depend for their advancement, and even for their reality, upon the merits of the Optical and Physiological principles which will come in part under discussion in the Letter that follows.

TO SIR ANTHONY CARLISLE, F.R.S., &c. &c.

Torrington Square, September 6th, 1832.

DEAR SIR,

Agreeably with the decision which you have already done me the honor to express, together with the highly important physiological and anatomical commentaries which you at the time communicated, evincing in a degree

which my present limits will not admit of adverting to in detail the extent to which the subject had previously occupied your attention, both in the writings of others and in your own researches; I now solicit of you, on public ground, as one of the successive Presidents of the Royal College of Surgeons of Great Britain, the sanction of your recognition that the Treatise of Cerebral Vision, together with its Supplement on Color Images in the Brain, which I previously submitted for your adjudication, has established the ground, that the Perception of Visible Objects is not in the eye, or retina; but that the theatre or locality of that operation is in some cerebral region posterior to the eyes.

When I consider the tissue of facts of the structure of the parts, which you pointed out to my attention, but which the state of my general memory leaves me only the hope that your other avocations may not prevent your affording to the subject, by the publication of them in co-operation with the detection of recrossed color images; I hope it will be welcome to you to accord the weight of your attestation, that a field is opened, and a stimulus furnished, to Philosophical Anatomists of the Brain, to follow out to its solution (what I believe optical evidence or research can no farther hope to do) the problem of the *locality at least*, if not the other great problems, of the Sentient Principle. In the present stage of the subject, it cannot but be of great moment if the Anatomists of Europe be apprised, under so high a sanction as yours, that the field is opened, and that no known fact limits the possibility of advance.*

I have the honor to remain,

Dear Sir Anthony,

Your obliged and most obedient Servant,

JOHN FEARN.

* On the copy of my letter it is proper for me to remark, that it was re-copied from a hasty sketch written after the letter was de-

Langham-Place, September 7, 1832.

DEAR SIR,

I feel obliged to you for the compliment of being asked, as a medical philosopher, to give my opinions upon your metaphysical researches respecting the site of consciousness, where visual images ultimately yield perception to the Mind.

I regard these profound inquiries as a most valuable part of medical knowledge; for, until the old rubbish, which has long obscured the physiology and pathology of man, shall have been cleared away, it is impossible to found any rational system for the healing Art. The superstitions of Physick have ever been its greatest impediments, and if yourself and other metaphysical labourers help us out of those difficulties, we may thenceforward hope to render our Art more akin to the exact sciences, and to establish it under safe practical rules. That our perception of sensible impressions does not abide in the part, or organ, where the material impress first impinges, is, I think, demonstrable to common sense; and, also, that the forms of visual images, as well as their different properties or qualities called Colour, are merely different modes of tact upon the retina, which is organically provided as a fit place to *note all* the circumstances of light, colour, and figure.—How these are severally conveyed to the *judicial tribunal*—the mind—it may be difficult even to conjecture; but that the mind can only become cognizant of them, record them in the memory, and compare them with evidences from the other sources of sensation in the sensorium or brain, is to me self-evident. Perhaps an illustration from the grosser and more simple sense of feeling or touch may be acceptable. We feel every increase, or diminution, differing from our natural

spatched, and therefore may not be accurate; but it cannot contain any variation of the least importance. The copy of the answer, I think, is accurate.

temperature, say at the ends of our Fingers, also mechanical pressure, and even the impresses of degrees of hardness, softness, rough, or smooth, as well as pain, when those several causes are applied; and a blind man perceives all these distinctions: now it cannot be rationally supposed that these differing impressions mentally reside at the ends of our Fingers. The anatomical facts appear to be these; certain nerves which are part and parcel of the Brain emanate from that Organ, (doubtless the seat of the Mind,) and are continued to the ends of the Fingers. These continuations of the material of the Brain are provided and ready to receive the various impressions alluded to, and they are the mere conductors of all such impressions; but their final terminations in the Brain itself connect the seat of sensation with the depository where perception obtains, and in which there are special depositories belonging to each especial organ of sense, and for every sensible living structure; the conscious presiding mind there receives its several intelligences, and directs its subjected automata accordingly.

I have trespassed thus far to show that I think with you concerning the ultimate receptacle of Colour Images, where they become cognizant to our minds. But the more refined subtleties of your profound researches I have not time to discuss.

Both human Anatomy and comparative Anatomy exhibit a manifest correspondence between the instrumental organs of Vision, Hearing, and Smelling, and peculiar structures in the Brain; and the damage of any one of those *perceptive* structures paralyzes the sense to which it belongs.

Dear Sir,

Your obliged servant,

John Fearn, Esq.

AN. CARLISLE.

The reader will distinguish, in the Letter of Sir Anthony Carlisle, that he accords his judgment altogether as

a Philosopher of *Corporeal Structure and Functions*; and does not express himself out of that province, which, if done, might possibly have rendered him liable to an Optical discussion demanding an inconvenient occupation of his time. But it is altogether manifest that Sir Anthony Carlisle, from his rank as a Medical Philosopher, would not have accorded, for the express purpose of being made a public document, his professional co-operation with the facts of Cerebral Vision, if he had not previously witnessed, and warmly entered into, the exhibition of the ocular phenomena which form the ground of his concurrence.

It is also manifest that the judgment in question goes much farther than embracing the mere Optical considerations. And there could be no cause, or incitement to Sir Anthony Carlisle, from any circumstance of power or influence in my situation, to accord his spontaneous and unclaimed judgment, that my metaphysical researches possess any thing approaching the importance to the Medical Art which he has deemed fit to be promulgated. If his intention, however, had been to compliment; No man can suppose he would have trifled with his own fame in the performance of it. It is at the same time a matter for the consideration of Medical Philosophers, and Medical Practitioners of every mode and grade; that a distinguished individual of the former class has avowed, and avowed so explicitly, the bearing of Pneumatology upon the healing Art—an occurrence, certainly, the more valuable when vulgar opinion, and far higher than vulgar opinion, lie buried alike under the prejudice that what it called Metaphysic has *no bearing upon the daily concerns of life*.

But what shall we say, when all this has been proclaimed to be nothing but a *paradise of fools*! How shall we sustain the shock, when an individual of the optical attainments of Sir David Brewster, in his *Journal of Science* for April 1831, (though until now unknown to me,) has made an exterminating attack upon Cerebral

Vision, stock and branch ; and, with an animosity which, throwing aside courtesy as if it could have impeded the work of destruction, asserts that, if my conclusions are true, “ all philosophers are fools, and all philosophy folly.”*

If it cannot here be supposed within the range of possibility, that this procedure has been the effect of wounded egotism, crossed in its path by being precluded from a great province of Optics by a stranger on that ground ; then, certain it is that an unqualified condemnation by so reputed an optical inquirer as Sir David Brewster is a matter which demands our grave consideration. In this case however, and before we come to the scientific merits of the subject, it cannot but be important to observe that Sir David Brewster has executed this scientific onslaught *previously* to the publication of my Supplement “ *On Recrossed Color Images in the Brain.*” It is not but the original Treatise contains ample proofs of the subject, to unbiassed and attentive optical adepts. But the tribe of phenomena—the color images—detected and described in that Supplement are of such an obvious and irresistible nature, that I think it would have been fortunate for the fame of Sir David Brewster if he had known of their existence before he threw away the scabbard. As an omen, here however, of the claims of Color Images on exchanged sides in the Brain, it must be a matter of some moment to ask the question ;—If this subject be nonsense, or nothing, Would the Royal Society have sanctioned it,

* When I said “ we,” in the place here referred to, I meant the *community* ; and I do not implicate Sir Anthony Carlisle. And it is due to him to state, that he had promised his recognition long (I believe a year) before the date of this letter. Besides which, I declare, in order that no bias or feeling may be imputed to him, that, when I wrote as above to him, I had, *purposely*, never mentioned the criticisms, or even the name, of Sir David Brewster to him ; and I confidently believe he had not the slightest knowledge that the latter had written against me.

as they have done, by a printed Abstract of its substance? Or yet, If being something, but still nothing new; Would the Royal Society have accorded to an entire stranger such a sanction; or would it so much as have admitted to a reading any such Paper, when, I believe, there were several hundreds of other Papers which could not obtain that distinction? Assuredly, on the first blush, this fact must possess at least a grain's weight, against the formidable gravitation of Sir David Brewster's opinion. But I pass on under this head, to a very different consideration—namely—one which involves other important philosophical consequences.

Sir David Brewster, precluded from any entrance upon the province of Cerebral Vision, has turned off in an opposite direction: I say *precluded*, because I shall here shew from his own dates that he has, *after* his condemnation of my views in 1831, avowed, in his "Natural Magic" published in 1832, his intended enterprise, as a project for *future accomplishment*. Thus, in page 48 of that work, he says—"In his admirable work on this subject, Dr. Hibbert has shewn that spectral apparitions are nothing more than ideas or the recollected images of the mind, which in certain states of bodily indisposition have been rendered more vivid than actual impressions, or, to use other words, that the pictures in the 'mind's eye' are more vivid than the pictures in the body's eye. This principle has been placed by Dr. Hibbert beyond the reach of doubt; but I propose to go much further, and to shew that the 'mind's eye' is actually the body's eye, and that the retina is the common tablet on which both classes of impressions are painted, and by means of which they receive their visual existence according to the same optical laws. Nor is this true merely in the case of spectral illusions: it holds good of all ideas recalled by the memory, or created by the imagination, and may be regarded as a fundamental law in the science of pneumatology."

On this descent (if I mistake not the first) of Sir David Brewster upon *Pneumatological* ground ; though provoked to the degree which will appear in the sequel, I feel too much what is due to myself to bandy contemptuous effusions with him, in return for those which he has bestowed on me for my irruption, as I confess it was, into Optical science. But I will here, as demanded by the interests of pneumatology, state some observations on his proposed enterprise. When he talks, *as a pneumatologist*, of pictures “*painted*” upon the retina ; he uses a perversion of name, and a misconception of fact, utterly in the face of all Pneumatological Knowledge : and it can be no apology that optical writers, and Dr. Reid as an Optical writer, employs the same perversion of terms. Dr. Brewster must have known that Sir Isaac Newton, even as an optical writer, felt it necessary to absolve himself from this intolerable sin in philosophy : For, under the express name of a “*definition*” of the subject, Newton, in his Optics, says— “ The homogenial light and rays “ which appear red, or rather make objects appear so, I “ call rubrific or red-making ; and those which make “ objects appear yellow, green, &c., I call yellow-making, “ green-making : and so on of the rest. And if at times I “ speak of light and rays as coloured or endowed with “ color, I would be understood to speak not philosophi- “ cally and properly, but grossly and according to the “ conceptions of vulgar people. For the rays, to speak “ properly, are not coloured : In them is nothing else than “ a certain power and disposition to stir up in us a sensa- “ tion of this or that colour.” The violation of philosophy thus abjured by Newton is certainly shared with you by writers in general ; But the example of Newton ought to have stopped the contagion ; and no length, or unanimity, of authority can prevent the necessity for purging the subject of a fallacy which hitherto has proved its bane.

As a single example of this ; in Dr. Brewster’s Paper,

read to the British Association, he says—"a *circular spot of colourless light is produced*," when he means only that a *sensation of color of no decided tint* is produced. Such a perversion of terms as this would be scouted in any exact science; because, to talk of *colorless light*, or *yet of colored light*, is an absurdity to the last degree in violation of the pneumatological fact that *light is not a sensation*. If it shall suit his views to force this perversion upon Pneumatology; I affirm, it is the omen of his certain disaster, even if his intended project had been otherwise far more promising than I conceive it to be.

In consequence, however, of his intended project, the great question concerning the Seat of Perception and the Nature of Mind appears to depend for its solution upon one of three schemes;—namely,—That of Plato, as improved, or purified, by Locke and embraced by Newton, and which holds the visible object we immediately perceive to be *color images in the mind*, the establishment of which is the main object of my pneumatological and optical labors;—That of Reid, which affirms that we perceive immediately, but mysteriously, the things in external space;—and lastly, That of Sir David Brewster—that the only visual things which we immediately perceive—that is to say our *very ideas*—are *impressions projected upon the retina*.—Now, as my Treatise of Vision, and the Paper to the Royal Society on Color Images which forms the basis of my First Supplement, are both dated 1830, I could not have known of his intended project, announced only in 1832: and, therefore, I had never dreamed that I had any other scheme to contend against than that of Dr. Reid.

Very recently before my seeing his Natural Magic, however, I learned, from some repeated criticisms of my writings by my fair antagonist Lady Mary Shepherd, the existence of Mr. Crisp's "*Observations on Vision*." And, upon consulting that Book, I found his principal object to have been to prove that "*the projections on the*

retina are the immediate and the sole objects" of vision. Thus, the originality of Sir David Brewster's projected scheme, in so far as regards the *ground-work*—namely,—our perception of *ordinary daily visual objects*—belongs undeniably to Mr. Crisp; although the advance which Sir David Brewster proposes,—that of shewing *also that our recollected and our imagined visual ideas* are nothing but impressions on the retina,—is, so far as I know, his own. It is at any rate plain, that the unsparing hostility, which he has manifested against my prior labors, is animated by his intended project;—which project is for ever foreclosed if my views of the subject be found tenable.

It seems that he and I are at least of one opinion in holding the Scheme of Dr. Reid to be out of the question. But, in the outset here, I remark, upon general ground, that if the assertion of our perceiving objects *in the sensorium* be a fallacy, it has at least a world of evidence apparently to support it, while the scheme of our perceiving, immediately, objects in external space has revolted the great bulk of philosophers, ancient and modern. But, to affirm that the objects we perceive are *neither* in external space, nor in the sensorium, but *reside in a half-way-house between* the sensorium and "external" space, appears to me, upon the first proposal, to be out of the pale of all rational conjecture.

And here, in the first place, we know, it is not thus in the *analogous sense of Touch*. For we think we perceive an external body at the end of our Finger; though all physiologists, in agreement with Sir Anthony Carlisle, know that we are deceived; and they also know, certainly, that there is *no half-way-house of perception* between the point where the external object is in physical contact with the finger and the sensorium or mind.

If Sir David Brewster will here insist, that the *projections on the retina* are no more a half-way-house between the mind and external objects, than the *nervous impressions on the ends of the fingers* are between the mind and the

thing touched ; in this case, although I confidently object to it that there is *no distance of space between* the two latter, and *all distances of space between* the two former ; I will here, for the moment, suppose him to be right, and then let him mark the consequence. If the immediate and only visible objects we perceive are the *impressions on the retina* : How then can there possibly exist any principle of EXTERNAL direction of objects from the eye, which is the supposed principle on which he has condemned all my conclusions ? If the visible objects we perceive are IN the eye ; there cannot be a flatter or more immediate contradiction than to affirm that we see them in ANY DIRECTION BEYOND the eye. It is here self-evident that, upon his own scheme, as well as upon my principle of *co-incident images*, the direction of every visible object is *in the line from the CENTRE OF PERCIPIENCE in the sensorium*, to what I must call its SENSATION-IMAGE ON THE SURFACE of the sensorium. And, while I have demonstrated, in two different Supplements, that the place of a seen object is its *place on the visual tablet or field of color images in the sensorium* ; I have at the same time shewn that the *tablet of retinal impressions always agrees, or nearly agrees*, with the *sensorial visual tablet* ; so that an impression upon the *middle of the retina* will always produce a sensation—i. e. a color image—on, or near, the *middle of the sensorial tablet*.

And here I remark, to the credit of Mr. Crisp, that he asserts, and insists, that the place of a visible object is *not in any external direction*, but that it is *purely its relative place on the retina with regard to that of other forms impressed upon it at the same time*. This, indeed, is not the true principle ; because the true principle is demonstrably *within the sensorium itself* : But, still, it *corresponds with* the true principle ; and proves that Mr. Crisp saw clearly the fallacy of the principle of external direction from the eye. And if he had known that there is a tablet of sensation-images in the sensorium, as well as a

tablet of impressions upon the retina ; he would certainly have recognised, at once, the principle of *coinciding images*, laid down by me, as that on which we perceive the direction of any object from the point of percipience in the mind. It is unquestionable that I never saw, or heard of, Mr. Crisp's book until July last (1832). But his book (and it contains very acute observations) shews that I do not stand alone in the "folly" of denying the principle of external direction.

To pass on, now, to the concluding consideration here.— If it be true, as Sir David Brewster has proposed to prove, that ANY of our visual ideas, or visual sensations, are only impressions on the retina ; or, even, that their objects or immediate optical causes are these impressions ; I should grant it very probable that ALL our visual ideas of memory and imagination are also such. But the judgment of all Physiologists, in concurrence with Sir Anthony Carlisle ; as well as the whole of Cerebral Vision ; are against the existence of the condition first mentioned. I should not, however, have started any objection to the project under consideration, were it not with the intent to accord my belief that Sir David Brewster may have discovered evidences to shew that, in the case of every one of our visual ideas, even those of memory and imagination, there is a *concomitant resembling impression upon the retina* ; which, if so, it must be expected, will be fainter, or stronger, according to the intensity of the visual idea.

If he has discovered any such fact ; it must be very interesting, and may be very important from a variety of unseen consequences : but I may venture to anticipate, it shall come to appear that the retinal impressions are *merely automatic re-actions* of the feeling or thinking mind upon the visual mechanism in the brain, extending themselves outward to the retina. The expectation of such an automatic process, as a result of all the facts of Cerebral Vision, is so natural and obvious, that, the moment I read the announcement of his project, I discerned its great

probability; and very soon after mentioned it to two metaphysical friends, who were present with me at the time, when they both instantly exclaimed upon its obviousness. Upon this, then, I have to wish Sir David Brewster success in his enterprise, the more especially because, if he succeed in it, it will form an appendage, and I shall admit at least a very curious appendage, to the Science of Cerebral Vision. But, if he persevere in the resolve to shew that *vision is in the eye*—"that the mind's eye is the body's eye;" I confidently predict, nothing but disaster can wait upon the attempt: And, in this case, his discomfiture would consist in his mistaking the *effect* for the *cause*.

To these remarks, which by no means go adequately into the subject, I merely add that if, as his project manifestly involves; the ideas of the mind must emanate forth from the mind, to be written upon the retina; and must then be read by the mind thereon, without reading which the mind cannot be conscious of its ideas; in my opinion, a more impossible supposition has never fallen in my way.—Such, however, is the Scheme which he has announced to the world as constituting a THIRD Champion on the arena of Pneumatology; and which, he conceives, will repeat to Philosophical History the lesson of the *Two Lion-like men of Moab*, in the fate of the Reidian and of the Lockeian Schemes.

As the matter of most immediate importance here; I conclude by repeating that Sir David Brewster, by alleging that the visible things we perceive are in the eye, and *not beyond* the eye, has most manifestly had the fortune to furnish his own refutation of the *pretended principle of external* direction. This result is so manifest, even in the very contradictory terms of the proposition, that I think nothing would add to its force; though refutations from optical reasoning must follow in the proper place. And I need only add, here, that *there* is certainly a principle of visible DIRECTION WITHIN THE

SENSORIUM, and *from the CENTRE OF PERCIPIENCE, corresponding with* that of external objects from the eye.

In order to prevent mistakes, it may be of use to point out the following facts.—External objects certainly *EXIST in certain localities*, and therefore they *POSSESS* an *external* direction from the eye: but we could *never have known* this fact except from the Sense of Touch, which assures us that our daily visual images have a *cause beyond the eye*. But Touch cannot come upon *optical ground*, and give his evidence *as optical* evidence. It is certain, therefore, that we do NOT SEE external direction; but we *learn its existence*, as we learn the existence of the objects which possess it—namely—from *use and experience*: And every act of our perceiving it is an act of *judgment*, and *not of vision*. But the act of judgment follows that of vision *so instantaneously*, that no man, except from reasoning, can believe it is not an act of vision. As a proof of this, both Dr. Hibbert and Dr. Brewster admit that *spectral apparitions* are confidently taken by men for external objects, though no external object exists as their cause. No man will pretend that there is *any visual element* in a vision that has an external object or cause, that is not in every vision of a spectral apparition. If, then, there be *no such thing as external direction in the one case*; How can there be any in the *other*? Have the actors in our dreams any external direction from the mind; although, according to Sir David Brewster's project, those actors *must be as real* as any that we *properly SEE* when actors are before us on a stage?

It must here become obvious that, of all the three schemes in question, that of Dr. Reid is the *only one that admits a possibility* of our SEEING external direction. If, as he assumed, we SEE *external objects immediately*; we, then, must SEE *external* direction. And he was well aware of this, and therefore stoutly maintained the pretended principle in question. But the bare proposal of it,

either upon my scheme, or on the proposed scheme of Sir David Brewster, is a most certain absurdity.

To those who are fully in the subject, I think, there cannot appear a doubt but the question resolves itself into this:—*Is external direction* a thing that we SEE, or only a thing that we JUDGE? Dr. Reid holds it to be a thing that we SEE; and Sir David Brewster holds this after him, because he *expressly calls* it “*seeing*,” as I shall shew. This proves that he is soundly asleep with regard to *any distinction* between *whether* we SEE it, or only JUDGE it. It is from this that his great mistake arises. Now, the distinction being here pointed out; I hold it to be a thing that we JUDGE: and Dr. Porterfield, upon another ground, has held the same.

The depending great result is this: If external direction be a thing SEEN; then, Cerebral Vision is a dream. But, if external direction be *only a thing* JUDGED; then, Cerebral Vision is a reality. *

* Dr. Reid, in his “INQUIRY,” chap. 6. sect. 18, page 336, says, in speaking of Dr. Porterfield’s views,—“We agree with this “learned and ingenious author, that it is by a natural and original “principle that we see” (mark the word “SEE”) “visible objects “in a certain direction.” But I here observe, that Dr. Porterfield himself saw the important distinction which I have made in my original work and insist on. In that Treatise, I have quoted him (from his 5th Book) for talking of the means which “by sight “we come to judge,” (mark here the distinction he makes between SIGHT and a consequent JUDGMENT) “of the situation of external “things.” And I have there stated that his repeated expressions go to shew that he meant we ONLY JUDGE of external direction. This, indeed, was *only being consistent* with his whole general views: because Dr. Porterfield maintained, throughout, the existence of a *Sensorium* and our *perceiving external visible things by means of images*. The quotations here given must be of great importance, in order to shew that Sir David Brewster *altogether confounds* the grand critical distinction between seeing and judging of the direction of EXTERNAL objects.

Sir David Brewster ought to have known, because all the anatomical world knows, the momentous distinction which he has

TO SIR DAVID BREWSTER

As Conductor of the Edinburgh Journal of Science
for April, 1831, &c. &c.

SIR,

AS it is certain that my extermination as a member of the scientific community must be completed by the power and credit of which you have availed yourself to effect it, unless I can counteract such a result by withstanding the attempt; there cannot be a doubt that the motive to this letter is that of self-preservation. And here, in the outset, I declare I entertain no vindictive feeling towards you. Let, therefore, every honest man observe, what spirit is manifest in my present writing, and what in yours: And let him pronounce, on the merits of the case, that sentence for which God will requite him.

One distinction, indeed, every man must observe between the two statements. My oppression is, and long has been, to the last degree grinding: and my literary peril is now rendered by you no less than imminent, in case, as has appeared too ominous, the scientific bulk of the British Community, as such, forms the only class

thus confounded; that is, he ought to have known that the JUDGING OF EXTERNALITY, (AT ALL,) IS NOT AN ORIGINAL OR CONNATE LAW OF THE MIND, although his predecessors on the same ground—Doctors Porterfield and Reid—strangely maintained that it is. Had the youth, when couched by Cheselden, seen the objects around him AS EXTERNAL objects; Sir David's cause had been gained: But he saw them "AS TOUCHING HIS EYES;" and Sir David's cause is lost.

Besides all this; It is certain that the direction of an external object, from that part of the retina which is impressed with light from it, is, in most cases, such that the *opaque sclerotic coat of the eye is right between* the object and that point; so that, we can *no more properly* SEE the object through it, than we would see it through a stone wall.

The philosophical eyes of Europe will be upon England, in the part which she shall take in this controversy.

of Englishmen who do not revolt on the witnessing of flagrant injustice : And these truths require, of course, to be adequately stated. But you consign to a scientific death in few words, and with an air of indifference which few would evince in the crushing of an insect ; and have volunteered, toward a man in his decline, who had done his work and whose future labor the hand of nature had foreclosed, a most supererogatory insult, in the form of a mock advice by what *future* course of amendment, moral as well as intellectual, he may “ *do something that will give him credit.*”

On an assault which, (as I am shut out from the great channels of promulgation,) leaves me absolutely nothing, but the contempt of all men ; I am still bound to employ no tone but that of complaint. I shall therefore only remark, here, that discourtesy, as well as courtesy, has its laws ; and, harsh as they are, they do not tolerate an onslaught, or an aggression, which regards no tie. With this single specimen of the humanity with which you have exercised your power, from a vantage ground which must already have spread the defaming of me over Europe, I proceed to the merits of the case in the order in which their heads are enumerated in the title of this letter.

HEAD FIRST.

Your assignment of my Moral.

BY one of the numerous impediments to which I have been long subjected, through a decline of constitution and inability of attention, I missed (I know not how) until the commencement of this reply, the fact that you have, in your “ *Edinburgh Journal of Science for April, 1831,*” (*that is a year and a half ago,*)—inserted strictures on my Treatise of Cerebral Vision : And thus, all the evils of which I have to complain have been operating the while, in their spread over this and other countries : while I must have been viewed as acquiescing under their onus. I first

learned their existence from a friend, owing to the mere accident of my mentioning your “Natural Magic,” which I had just purchased. And he then mentioned his foreknowledge of the thing; but had deemed it too utterly out of the pale of toleration to call my attention to it. It can hardly be doubted but that both he and other friends have tacitly thought that, as coming from such authority as yours, the strictures were such as I felt I could not answer.—You however commence the article in question in the following terms.

“MANY of our readers are no doubt acquainted with “the pneumatological writings of Mr. Fearn, and with “the correspondence which they occasioned with the late “Professor Dugald Stewart, and which has been published in the *Parriana*, or notices of Dr. Parr. Our “illustrious countryman did not view the speculations of “Mr. Fearn with a favorable eye; and to Mr. Stewart’s “great influence over the public opinion Mr. Fearn attributes the total indifference of his countrymen to his “intellectual labors. He has therefore made a direct “appeal to the philosophers of France, to whom he dedicates his present work; and if it should meet their unqualified censure, he says he shall be content to have “it supposed that his previous writings are of no better “complexion.” (You ought here, in fairness, to have inserted *my accompanying remark, namely—“although “the matter is not my subject.”* But you go on to say— “Mr. Fearn then makes a second appeal to the Lord “Chancellor Brougham, and in the subsequent part of “the work he calls upon the editor of this Journal by “name to avow his assent to the ‘Laws of Cerebral “Vision.’” You then, in a new paragraph, to give the assertion more notoriety, say—

“The strictures on Mr. Stewart’s conduct, in giving “his opinion of the pneumatological labors of Mr. Fearn, “have but little tendency to encourage others to under-

“take the same ungracious task.” And, having premised this imputation upon me, you proceed as will appear in the sequel.

Now the moment which you chose, for thus fixing upon me a stamp of odium, was next after that in which yourself had recorded the act of my deep complaint, to our own and to other countries, as laboring under literary oppression, not indeed from critical condemnation, but from critical silence ;—a moment when any fell adversary might seem safe to say—“persecute and take him, for there is none to deliver him.” It would be inconsiderate in any one to think that the hurt in this case was of no baneful consequence. The man who could attack, with tenor of deep import, (and such indeed did mine from resistance of my right become) the venerable, the meritorious, and highly distinguished Professor Stewart, for no deeper cause than the “*not viewing his speculation with a favorable eye,*” must not only be lost to every sense of urbanity, and decorum, but he must be much worse ;—he must be unsafe in every sort of intercourse, scientific or social. Let every man lay his hand upon his breast and say, What would be his feeling, and his rule of action also, toward any one upon whose character such a stigma had been justly affixed. Would he seek either friendship or intimacy, or yet willingly mix himself up in scientific discussion, or ordinary acquaintance, with a being so resentful, and unawed by worth, or eminence? It is certain that even the imputation of a want of probity could not make a man more shunned, than that in question. Thus, when bent upon the act of sweeping my scientific labors from the ken of the community, and when (it will be shewn) you had premeditated to appropriate to yourself *my originality in the field of “Pressures upon the Eyes;”* you commenced this act by stamping a mark of odium upon my name, and turned me forth, most certainly to be unsympathised with, and to scare every de-

licate, and every decorous person, that might otherwise be disposed either to discuss, or defend my labors.

It is, when pointed out, a striking coincidence of proceedings, that you have herein imitated Professor Stewart ; though you have gone far beyond him. For he admirably employed the tact of *reiterating* upon me the imputation of my having taken "*offence*;" although I, first and last, delicately and studiously expressed myself as being utterly without any such feeling. I trust, the keeping of the two procedures, in the logic which they both alike evince, form their own commentary, and shew the wisdom in its generation, as well as the power, with which I have had to contend.

Here I might stop for a moment, and ask,—whether any who have conversed with me will charge me with being intolerant of opposite opinion, or out of the pale of urbanity, or candour, on any discussion of my views. I deceive myself if I might not even hazard the asking, if they know any man who they think would more respect the public dealer of a fair blow at my conclusions, than they have found me. But I resume the matter under consideration.

Now, the truth of the case which you have thus misrepresented is that, so far was Mr. Stewart from *ever avowing any* difference from my views that could call up from me the least degree of resentment, that, on the contrary, HE HAD EMBRACED—*i. e.* TAKEN UP—*my views* ; and had then persevered, against my several *private appeals to him through a course of three years*, that he would *merely publicly acknowledge my "priority"* in the matter. In which patient appeals, *instead of taking up any tone of offence*, I always put it upon the supposition that he had not known of my being before him. And thus he drove me, by oppression, to a *public* appeal. As you have read the account of the matter in the "*Parr-iana*;" and have referred to that work ; it is impossible

you can say you have been misled. And, besides this, from your accredited office and responsibility, you were *especially bound to be not* misled in throwing a moral and onerous imputation upon any man. I can have no doubt in appealing such an act to the judgment of good men.

Of the many critics of the day on the *Parriana*,—to the account in which work you refer,—there are a number of them that have extended their attention to the correspondence. And, so far as I am aware, not one of them has uttered a single syllable on the side of Mr. Stewart. The least favorable to me among them, that I have seen, is that given in the *Times Journal for Sept. 5, 1828*: which I shall transcribe here for a double purpose, and because its internal evidence proves it to be the effusion of a partizan:—

“ We have now waded through the whole of this bulky
“ volume with the exception of 107 pages ”——“ By a
“ Mr. Fearn, and giving an account of his actual corre-
“ spondence with Dr. Parr, and his attempted correspon-
“ dence with Dugald Stewart. We cannot pretend to
“ analyse this, and for this reason—we have found it im-
“ possible. Thrice have we attempted it, and thrice has
“ sleep descended on our eyelids. But our failure is im-
“ material.” &c. &c.

Here then, in the first place, I ask—Would this writer have betrayed his chagrin, at the manifest merits of the controversy, by so glaring a virtual acknowledgment of their being against Professor Stewart, if he could by any stretch of ingenuity have availed himself of a pretence that I had attacked that venerated individual for his ONLY
“ *not having viewed my speculations with a favorable eye* ” ?

It may be sufficient here to say—It is certain the *Monthly Review for September 1828* did not strain its eyelids when it, *a second time and after a lapse of years*, awarded the decisive and energetic sentence which it has expressed upon the controversy, in its remarks on the *Parriana*.

But, with regard to the *Times Journal*. It had, some time before, and not at my instance because I had never obtruded my labors upon its attention, published remarks upon Dr. Parr's "*Bibliotheca*;" and it chose to insert, not without some note of handsome expression toward me, the remarks which Dr. Parr had written on the fly-leaf of my Essay on Immortality, which also were published by several contemporary Journals. The writer in the *Times* did not *then* designate me as "*a*" Mr. Fearn, and thus evince a spirit which must reflect upon himself more than it does upon me. Up to that period, however, it is in evidence, the *Times Journal* was not hostile to me. But we find, the ungracious, and in part unfounded, passage above quoted was issued from the *Times* the moment I appeared in collision with Mr. Stewart. I do not know, now, that the *Times* is hostile to me. But I have here to add that, I addressed to its "Editor" a letter; in which, without imputing the matter to him as his writing, I merely "*put it in his option to be the first*" to contradict the lessening imputation of my having attempted a correspondence with Professor Stewart. And, though I have waited patiently these four years, for justice upon this detraction, my letter has never been noticed. Will any man *now* say that I have been grappling with a shadow, in complaining of general oppression under the influence of Professor Stewart's name, when, in addition to an exclusion from all the Quarterly Publications, I cannot get redress for a stigma in the *Times Journal* that was undeniably inflicted to lower me in my predicament of corresponding with him?

If the poorest artizan, who could shew the *Times* vouchers for having been (in the popular phrase) his "constant reader" for more than a quarter of a century, had appealed to it in any such case; Would the *Times* have refused justice, when the matter to be rectified had occurred in its own columns?—But the hour has come when the Gentlemen of the *Times Journal* must certainly discern, that their honor is concerned to speak out on the work

that is now so manifestly in progress. I call upon them, therefore, apart from every other office; (I do not name them, because it would infract a usual courtesy; but their Names must go down with the history of what I have been subjected to;) to render to the case that justice which they have, however it may have been unintentionally, impeded. If they deem their ingenuousness concerned to answer this call, from one whose intentional course of life I think they will not deem other than meriting consideration, I shall be satisfied. But, if not,—then,—Will any man say that I am not a sacrifice to *influence*? *

To return, now, and conclude with regard to this part of your conduct; You have, as the initial step in the act of crying down my whole literary life, fixed a stamp of odium on my moral disposition; and, in so doing, have taken a time when the merits of my controversy with Professor Stewart had slept in the minds of all but a few *philosophical* readers, and when therefore your misrepresentation of the fact must have impressed the far more numerous of readers of *Science*, with the belief that the whole matter was only a manifestation of a resentful disposition in me. Let all men of upright minds judge you upon this act.

I pass on, to the next head of your aggression. And it will be seen whether, or not, the same spirit, with an increased bent on my destruction, be made evident under every one of the heads in question.

HEAD SECOND.

Your exterminating implications, to the total discredit of my Writings, in every department of my labor.

AS I shall welcome you, under the next head, to the result of your optical criticisms of my views; I shall not here enter into their merits, but shall merely, in the first

* That the *Times* feels well toward you, is shewn in its columns. But I shall trust to its sense of what is due to itself.

place, point to the *spirit* in which they are conveyed ; and shall then consider only that part of your conduct immediately here referred to.

Having, in your first strictures pronounced upon all the early Sections of my Treatise the sweeping sentence due to “fools,” and to the “philosophy of folly ;” you then proceed to take up the *Fifth Section*—namely, “ON VISION WITHOUT EXTERNAL OBJECTS ;” which, you add, is a “subject very little studied, and one on which it would be difficult to make numerous experiments without stumbling upon some useful or important fact.” From your *general* tenor, I must here understand that, I have not in the course of my numerous experiments (and they certainly have been very numerous and with repeated courses,) so much as stumbled upon a single useful or important fact.

Now, upon this insinuation, I ask—Is there a man possessed of a particle of honor, or ingenuousness, who will read the fifth section in question, comprising thirty-two pages of matter, with a plate, and recounting a systematic course of pressures upon the eyes ; and, then, will put his name to an assertion that this ought to be designated a course of *stumbling*, or that no important fact has been the result ? And, if no such man be found ;—then,—Is this latitude of insinuation tolerated on any high arena of argumentation ? Or, would you have dealt out the same toward any beneficed Professor, to whom the channels of reply are open, if he had published the *very same* course of pressures that I have described ?

But this is not all : For, in the next paragraph, in giving some details of criticism, you have uttered the assertion that, in my course of pressures in question, and in my account of the experiments producing the *luminous circles*, I “*treat only of the direction in which they are seen.*” Now, besides treating of the *directions*, I have treated momentarily of the *re-crossing and the distances between the circles*, which you will find to be of vast consequence : and,

also, of the “*correspondence of the sizes of the seen circles with the degrees of pressure;*” of the *vividness*, as well as the size, being in proportion to the *pressures*; of the *varying colors* of the circles, as the pressure is *varied*; &c. &c. comprising a descriptive and systematic account of their phenomena, on re-crossed sides, and in all cardinal bearings and distances; which, I believe, I have by no means been done justice to in this enumeration. Where, then, is the fidelity of your report?

On the credit side of your strictures, to counteract the general tenor of condemnation already alluded to, you have not accorded so much as a syllable in admission, that *any part* of my whole Treatise of Cerebral Vision evinces the detection of a single fact, which could relieve the eye from the contemplation of one continued extent of presumptuous ignorance!—*Is this the Arena of Philosophy?*

You indeed say, that “ALL my views are original:” And this is an important concession. But you do this only to add that, I am in the face of all philosophers, and all philosophy. Even the Fourth Mode of Vision has not called forth from you a syllable of acknowledgment; although you have owned its validity by replying to its conditions, and must have known that Newton had, unsuspectingly, denied its existence. *Is this liberality?*—It must be owned that a whole volume of original views, on the subject of optics, is a large mass to be totally made up of nonsense.

IN FINE.—Having finished your office of Critic; and condemned the alleged culprit to a total exclusion from Optical ground, as far as concerns his *past* labors; you then invest yourself with the Monitorial office; and, with the authority of a Judge sitting on the highest tribunal, whence law and morality come with the most impressive weight on the feelings of all who listen, you deliver the following lesson for his *future conduct*:—

“We regret very much that we are obliged to give so unfavorable an account of Mr. Fearn’s Optical labors.

“ If he will only leave the field of speculation, and, with
“ some feelings of respect for his predecessors, will devote
“ himself to the hard labor of experiment and observation,
“ we have no doubt that he will do something that will
“ give him credit and reputation.”

Now this chain of *implications*, when turned into the chain of *assertions* with which it is strictly identical, is as follows;—that I have *never* labored hard, in experiment and observation;—that I have *never* had so much as *some* feelings of respect for my predecessors;—and lastly, that I have never, in the whole course of my labor in every department, done any “ thing that will give me credit.”—Let us therefore here observe, What are the relative situations of the parties, from, and to, whom this flow of scoffing was directed.

It was not that of a nameless writer, to whom no man of gentlemanly feeling, and far less any who had labored and merited any thing in science, would deign to return a smile of contempt: But it was the avowed act of a man on whom his Majesty had bestowed the honor of knighthood for his scientific attainments, and, consequently, whose elevation and place in the community ought to have been safely reckoned upon as a guarantee, to his King and Country, for his observance of at least a treatment that could be endurable to the feelings of any other gentleman who had handsomely appealed to his judgment, and without which guarantee the arena of science must become the scene of every latitude.—And it was thrown in the face of a man so old, as to have commenced an honorable life, I believe, before you were born, and whose life since then has never rendered him a fit object of personal treatment that would flush the face of a boy;—a man, moreover, who had never intentionally crossed your path, and whose only disrespect, or provocation, to you was his complimenting you by an appeal, at once, to your judgment and your ingenuousness;—one who has, at least with great labor, produced a number of

volumes that are not without witnesses in the world ; and who, it is certain, has been pronounced, both by English and by Scottish criticism, to have been right in a controversy of great moment with your “ illustrious countryman.” On this act, therefore, I say—Let men of right feeling judge you.

What I have yet said, here, only applies to the outrage of my feelings, if it be admitted that I have a right to have any. But the fact of the case obliges me, now, to point to the *consequences* of your proceeding. When it is reflected that I have been thus shorn of all credit by a person of your rank in the scientific community ; and through the channel of your accredited periodical, which has now unfortunately been carrying this sentence not only throughout Britain, but also through Europe and America ; is it possible to deny that I *must* have been a sufferer from this act, to a very serious extent, in the sale and promulgation of my writings on Cerebral Vision ? It is, no doubt, requisite that works of criticism should be allowed a great latitude ; in so much as may often afford shelter not only to illiberality, but also to malevolence. But your *Criticisms are not here in question* : You had *finished them* ; and were acting as a self-made monitor, in instructing me *professly for a future end*. When, therefore, my time of life, and well-known frequent jeopardy of constitution, are considered ;—Is there a man, unless it be yourself, who will set his name to a denial that this last supererogatory act (over and above its being unfounded in what it virtually asserts) is a deliberate piece of gratuitous and unalloyed evil, that had not one particle either of mine, or of the public good, for its object ?

On your adopting the smooth tone of *monition*, it could never be suspected, by readers in any country, that a man so raised, and backed by all appliances, would put on the robe of peace—nay of friendship—with a purpose of hostility. But certain it is that all readers, who know nothing of me, must conclude I am a *young* offender,

kindly schooled; and, to such readers the act will not appear as being even impertinent: while, as coming from you, every syllable of it is full of pertinence, and of proscription of my name, wherever your word has been received as that of a man of probity. Upon this, therefore, I plainly inform you, that my destruction must not be effected by your procedure.—If necessity render it imperative for my existence; I shall consult competent opinion, whether a jury would not pronounce that the object of your distinct supererogatory act was to prevent the sale of my writings by bringing me into contempt. If the Country shall rouse from its apathy on my continued oppression; that is the National Tribunal to which I desire to appeal. But, if this can fail; you may rely on it, you must abide by the consequence unless you make such reparation as remains in your power, and which I here call upon you to do. I think, there is no ingenuous mind but would be glad to see the poor enriched by the result, while it saw an individual rescued from injustice. And farther evidence, as to spirit, remains behind.

OPTICAL INVESTIGATION.

Your supposed refutation of the whole of Cerebral Vision, by the single assumed principle of External Direction.

Second Refutation of that Principle.

NOTWITHSTANDING you have indisputably cut yourself off from EVERY principle of *external* direction, by your proposal to prove that we see *no objects but the retinal impressions in our eyes*; I am here to consider you as presenting yourself on the inconsistent ground, of refuting my views by a principle of visible direction *beyond and perpendicular to the retinal impressions*. By way of Preface, therefore, to my offering several very distinct refutations of your reasonings, in addition to that above alluded to, I shall advert here to the reasonings of Dr. Wells, in

his opposition to Dr. Reid on this very principle ; because I have, in the Introduction to this Letter, critically quoted your own expression, to shew that you unite with Dr. Reid in the assertion that we “SEE” external direction.

Concurrence of Dr. Wells with me on this Subject.

Dr. Wells has strictly demonstrated, through a series of propositions, that we *neither SEE nor JUDGE* objects to be in a direction perpendicular to their images on the retina. Some of his proofs of this fact are unanswerable. And, being aware that the advocates of Dr. Reid’s view would seek shelter under the principle of *corresponding*, and *uncorresponding*, parts of the two retinae ; he combats this last principle by a train of *anatomical* reasoning ; but which, at best, is questionable and inconclusive. It appears, therefore, that he failed to prevail against Dr. Reid owing to the *pre-established influence* of Reid’s supposed principle, and to his inconclusive reasonings against the plea of *corresponding points* ; and, also, to his not having been able to substitute a tenable theory of *single vision*, which last he *professly built upon* his theory of *external visible direction*. Certain it is, that Dr. Wells has not produced that species of case which could, *upon the ground of corresponding points*, explode the Reidian and your own view of the subject.

To take, here, the matter of his first and cardinal proposition : When we look with our two eyes through two holes, and see them as *one same hole* ; we shall find, upon closing either eye, that the *direction of the seen hole does not change*, but that, whether we see with both, or with only one eye, the apparent one hole is in the direction of what Dr. Wells calls the “*common axis*,”—that is, in the *middle between* the eyes, and right before the nose.

Upon this, Dr. Reid, or yourself will affirm that the reason is because the two retinal impressions, from the two holes, are *upon corresponding* points of the two retinae. And thus, you take your refuge in this last reason

whenever the principle of an *external line perpendicular to each* retina is manifestly shewn to be false. The following experiment however, I think, will set this matter at rest. When I hold up my finger perpendicularly, at any point of intersection of the two optic axes, before the nose; and look stedfastly at the finger with both eyes; *I confidently judge it to be RIGHT BEFORE THE NOSE*, and Dr. Wells, and even yourself, would hold this unanswerable. Upon this, however, you will urge that the result is because the two images of the finger fall upon *corresponding points of the retina*. But *What is the fact?* The fact is that, although the principle of corresponding points is a *real and true* principle, (as I have proved throughout,) it has NOT HERE BEEN CALLED INTO ACTION,—for I have NOT *seen*, (and CANNOT without art see,) the finger with both eyes, though I have LOOKED *at* it with both, and, if I had not known better from experience, should confidently believe I had *seen* it with both. Here, then, when I have seen my finger with *one eye only*; and have, without doubting, *judged it to be not in any direction IMMEDIATELY FROM my EYE*, but *immediately in a certain direction from my perceiving MIND*; What becomes of the pretence of SEEING *in a line perpendicular to that point of the retina that is impressed?* Now, perhaps ninety-nine persons, or at least a large number, in every hundred, *never in ordinary* see any object with *both* eyes, though they all *confidently believe* they see with both eyes. And thus, it is only in rare cases that the principle of corresponding points *ever comes into operation*. There remain a variety of arguments, upon this ground; but they cannot have room to be inserted here, with exception of the following.

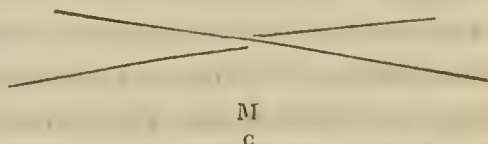
Dr. Wells, in his farther propositions, has fallen into a mistake in concluding that, because an object is seen to the left with the right eye, and to the right with the left eye, the one eye contradicting the other, the object must be judged to be in the *middle between* them. Because the

fact is that, if an object be situated in *both* optic axes, this *contradiction of places* never can happen, since, if it did, it must follow that we must see the object *double* every time we saw it with both eyes, if it were at any nearer, or farther, distance than the intersection of the two optic axes. Perhaps, Dr. Wells would reply here, that we DO see the object double in every such case: but, to this I reply that, we DO indeed see it double, but this is because we DO NOT see it in BOTH the optic axes, but see it from impressions upon *Uncorresponding* points of the two retinae. Not one of his supposed cases, therefore, of seeing to the right, or to the left, with either eye, when the *object is in the axis of that eye*, can be true: which I have demonstrated by the example above given. And in order to confirm this, I here assign the REASON of it. The reason, then, is that the *Axis of the Eye* CORRESPONDS WITH the *Axis of the Sensorium*; so that a retinal impression on the *Back Pole or Middle of the Eye travels backward through the cerebral region*, and produces a *Color Image* in the *Front Pole or Middle of the Sensorium*: And this *Color Image* is beheld by the MIND, from her POINT OF PERCIPIENCE *near the Centre of the Sensorium*. Hence, a *Color Image* is seen by the Mind in the very same place, whether we see it from an impression on the *axis of one eye*, or from an impression on the *axes of both eyes*. And, when we do *not see* it thus, at any time when we *think it is in the axis* of the eye, we may be assured it is NOT *in the axis*.

Let us now, for a moment, examine the *nature of correspondence*, in this case; even *when it is* called into operation. In any case of SEEING an object with both eyes; it is plain, the two retinae *do not correspond* BEFORE the eyes; because, *not only is there no means of agreement BEFORE the eyes*; but, besides this, the eyes *notoriously contradict* each other's reports of direction, as I have just shewn. The word *correspondence*, then, has *no meaning* if there be not two post-roads behind the eyes, and

a post-house where the two impressions meet. Such a point, of meeting and co-incidence, affords to the word correspondence a meaning, and a certainty of its truth; but, without this, there certainly is no sound more void of meaning than the word "*correspondence*," in the case in question.

Dr. Wells has cited indubitable anatomical authorities to shew, that there are extant *a number of errors* regarding the structure of the *eye*,—*crystalline*,—*retina*, &c. and their supposed functions of *transmitting rays*, and *assisting our judgment of direction*. And, keeping this in view, he believes that he works out his own theory of *single vision*, *altogether upon external ground*; although he has exploded the external principle of *perpendicularity*, of Dr. Reid and yourself. Had Dr. Wells once entered upon the ground behind the eyes, or cast at all in this direction; he might have come, in the course of experiment, to the curious fact, (pregnant, doubtless, with various consequences to the problems of vision,) that the *retinal impressions from the two eyes do not discharge* themselves on *one same* SENSORIAL TABLET; but that each eye discharges its impressions upon its *own proper Tablet*, in, or on, the sensorium. In my Supplement "*On the Sensorium investigated as to Figure, by a course of Pressures on the Eyes*," I have demonstrated, at full length, that the two respective sensorial tablets of color images are NOT IN THE SAME PLANE, but are *inclined to each other* in a small angle—thus: And that, although the two tablets must appear to the Mind



(SEE the PLATE to the "*Sensorium Investigated*,")
at M (*i. e.* from the *centre point* of the Sensorium,) to be, in a *great part of their lateral extent*, *one same tablet*; yet, each tablet has a WING on the same side with, and appropriate to, its own eye; which wing, on each side,

projects farther, *in its lateral extent*, than the verge of the other tablet, and thus proves its distinct existence.

Here, by the way, I am obliged to advert to the fact that, although this, my third or fourth *published* course of pressures, with such results as the above, was published in April 1832,—you have read to the British Association in June 1832 a paper upon Pressures on the eyes, wherein you alledge that, “*so far as you know*, the production of light by pressure upon the eye-ball has *never been carefully examined*.” In that paper, then, which the very assertion I have here quoted, and other evidence, proves to have been *your maiden* paper on the subject, and which, *when published in August 1832*, makes, with all its comments, *no more than full three pages* of your Journal, you have thus taken to yourself the ORIGINALITY and PRE-CURSORSHIP in the *Province of Pressures upon the Eyes*. But, of this, more in the sequel.

In the interim; boasting attack forces from me, however unwillingly, boasting defence.—From the SEEMING EQUALITY of the *inclinations*,—namely—the inclination of the *two sensorial tablets of color images*, and the inclination of the *two axes* of the eyes, we may doubtless presume that they *correspond in some way or other*. Has your “careful examination,” (*not filling, but only ruminating in, three pages* of your Journal,) led to the discovery of any such deep-hidden fact; or, to any fact that will hereafter be named in the same day with it? Has it led to the detection of the “*Sensorial Aberrations of the Eyes?*” Has it led to the fact that we can see objects *thirty, or forty, or more degrees behind the Equator of Each Eye?* Far more momentous, though far less hidden;—Have you discovered that the peacock’s feather (the “*circle*”) is seen; *not (as you affirm) “on the opposite side of the eye-ball to that where the pressure is applied;”—but is seen FAR BEYOND the opposite side of the eye-ball, to the right, or left, of the whole eye; so as to be absolutely and measurably in the*

direction over against the MIDDLE OF THE OTHER EYE, which fact, of itself alone, critically establishes Cerebral Vision? I might continue thus: But, Why need I go on to crucify your three maiden pages of discoveries from Pressures on the Eyes, if I have said enough here to release my labors from the total contempt under which you have buried them?

Concurrence of Sir Charles Bell.

Having always been absorbed in very different fields; and not supposing that any *recent* Author had appeared, or would engage, in a subject that has so often baffled all attempts at its solution; I was not, until this very point of my present Letter, aware that (now) Sir Charles Bell had written upon it; and had been combated by you, in your *Journal for November 1825*. In your strictures on that occasion, you quote Sir Charles Bell in the following words:—"When an object is seen, we enjoy two senses; "there is an impression upon the retina, but we receive "also the idea of position or relation which it is not the "office of the retina to give."—And presently after this, you quote him as follows—"it shows that vision, in an "extended sense, is a compound operation, the idea of "position of an object having relation to the activity of "the muscles," *i. e.* muscles of the *eye*. This you deny: and, among other supposed refutations of it, you think that, when a man *twists his head round*, and looks at an object without having moved his eye, he refutes Sir Charles Bell's position.

Now, in order to show, here, that I altogether concur with Sir Charles Bell; and that I did so before I knew that he had written; I here transcribe a passage from my "*Supplement on Color Images in the Brain*," published in 1831, which I gave in the spirit, and as an illustration, of my proposed principle of "*Coincident Images*" in my Treatise published in 1830, as being the *true principle of Visible Direction*.

“ Every spectator of a scene *must allow (and nature has well taught him how to do so)* for the VARIATION OF HIS EYE, as the mariner allows for the *Variation of his Compass*. Thus, if a man know that his head is twisted far to the right, and his eye twisted far to the right in his head; he then knows that the object he sees is *nearly behind him*: And this he does on the very same principle that the mariner, when he is steering ‘*North*’ by his Compass, and knows that his compass has ‘*Two Points*’ of West Variation, knows that he is *not steering ‘North,’* but is steering ‘*North North West.*’” That this is a legitimate illustration of my principle of “*Coincident Images,*” published in my treatise in 1830, (*and which you have read, though you do not allude to one syllable of it,*) is indisputable. And it is a coincidence with the position of Sir Charles Bell altogether striking; because, assuredly, it amounts to this—that “*vision, in an extended sense, is a compound operation:*”—by which I mean that *proper vision is of a Color Image on the tablet of the sensorium,* seen from the point of *percipience* in the mind; BUT *that we must compare this proper vision,* with our knowledge of the *posture of the eye in the head,* and of the *head on the body,* and, if need be, of the *body itself* with relation to the earth, or heaven.

As I cannot here seize a moment of time, to consult Sir Charles Bell’s Paper, I know not whether our respective views coincide any farther. But, if we diverge in opinion from this point; I trust the liberality of Sir Charles Bell will accord a due consideration to a course long so unexpected by me, as well as by him and all others, which has carried me into the region behind the eyes. And I here announce my intention to send to him, immediately, a copy of this letter; and to ask the avowal of his assent, or dissent, to the fact whether vision has been, as the result of all my publications on the subject, carried into the brain,—as it cannot but be of great consequence to the living world, and of

interest to those who shall succeed them, to receive the decision of so high an authority. I cannot doubt that he will consider the philosophical world as looking for the avowal of his decision. And his fame, both now and hereafter, will certainly be identified with the side which he may take.

A Third Refutation of your Principle.

You having tacitly assumed that the whole of Cerebral Vision is embodied in my 14th Proposition, although that is only the *first illustration* of what I have called the *Fourth Mode of Vision*; You thereupon write down the two words "COACH HORSES," as a substitute for my example of a *coach and of horses yoked to it*; And you then say—"Let us place the edge of a sheet of paper between H and H, the opposite edge touching the nose; so that when we close the *right* eye, we shall see only the COACH, and when we close the *left* eye, we shall see only the HORSES. Now since an inverted picture of the COACH, and also of the HORSES, is formed in each eye, a person behind the two eyes will see these two inverted pictures thus *ΣΕΣΘΗΝ ΗΘΥΟΟ*. The coach and horses are now no longer in their natural arrangement, as Mr. Fearn expresses it, but in two unnatural halves turned back to back; and, as we never witness any such preposterous phenomenon, he concludes that we do not see immediately from the inverted impressions in the eyes. Hence he is led to presume the existence of *some cerebral mechanism* by which the inverted impressions are rectified."

Now, as the wholesale contempt of my Treatise, by which you have outraged every consideration of lenity, has excluded you from all claim to it, I have no hesitation in saying that, with all your arrogance of infallibility, you have in the above statement of the case fallen into a misconception OF THE CONDITIONS OF MY PROPOSITION so palpable, as I could not have expected in a mere

tyro. And, to this, you have *added another mistake*, in the *substitute* which you have proposed for my example of a *coach and horses yoked to it*. The exposition of both which matters, I think, may tend to moderate any future tone which you may deem decorous to adopt toward my labors. I shall wonder, more than I have wondered yet, if men of optical science be not astonished at the following statement.

Thus,—*first*,—you have conditioned, on my part, a “CLOSING of the RIGHT eye, and seeing ONLY THE COACH;” and, then, a “CLOSING of the LEFT eye, and seeing ONLY THE HORSES:” when the FACT is, that the very statement of my 14th proposition, and the very essence of the *Fourth Mode of Vision*, both *insist on the condition that NEITHER OF THE EYES ARE TO BE CLOSED*, but that we are to “SEE AN EXTERNAL OBJECT, ONE HALF OF IT WITH ONE EYE, AND THE OTHER HALF WITH THE OTHER.” You will find the *difference in point of consequences*, between the two conditions, to be *optically immense*: and you can have no excuse for mistaking the matter; because you have correctly quoted the title of my 14th proposition, in which the words, here repeated, are given in CAPITAL LETTERS.

Secondly—You have fallen into the farther capital mistake of writing down the reversed words “SƆSƆOƆ HƆVƆO,” as a *substitute* for the *impression* of a COACH in *one* retina, and an impression of its HORSES in the *other*; and your mistake amounts to this:—The impressions of the words SƆSƆOƆ HƆVƆO on the retina are *only reversed impressions*; they are *not turned preposterously back to back*. They are, indeed, in *one* sense unnatural, or preposterous, in their arrangement; but this arrangement, (although it includes the turning of them *upside down*,) is only analagous to a coach and horses *turned FROM, instead of being turned TOWARDS, London*. But, when we see a COACH with the *left* eye, and its HORSES with the *right* eye, I say, it is a certain dioptrical result of

this act, that the *back of the coach in the left eye*, will be *turned toward the faces of the horses in the right eye*; and it is THIS, and *this alone*, that I call a “*preposterous arrangement*,” in the “*Fourth Mode of Vision*.”

You will presently find, that my 14th proposition will refute your principle of external direction in the most conclusive manner, *more ways than one*. In the interim; What lenity can you expect from me, insulted as I have been by your scoffing, that I should not hold up so palpable a pair of mistakes as those now exposed? That they must be written down, either to the credit, or the discredit, of your *Optical Judgment* there can be no doubt; because, if your stating of them had been with an unfair intention of turning my proposition into confusion, you would not have paid so dear a price for the baning of it, as the placing of your own optical understanding in such a predicament.

Nor are the mistakes, already pointed out, *all* that you have fallen into, in the passage in question. For you say—“since an inverted picture of the COACH, and also “of the HORSES, is formed in each eye,” &c. And herein, it is plain, you have inflicted another death on the conditions of the proposition stated by me:—because, there is *not* a picture of the COACH, and ALSO OF the HORSES in EACH eye, since that of the COACH is in *one* eye, and that of the HORSES in the *other*. Will any person, who is competent to the subject, readily believe that your words are here quoted with fidelity, when they express such a string of infractions of the conditions of that proposition which you *selected for the sole* subject, and position, from which you were to annihilate my establishment of Vision in the Head?

To come, now, to the *merits* of that refutation of me, which you have built upon the foregoing mass of mis-statements.—You commence thus:

“It is a law of vision deduced from observation, and

“ universally and demonstrably true, that when a ray of
 “ light, issuing from any point of an external object, falls
 “ on the retina, the point of the object from which the ray
 “ issues is seen”—(let it be remembered here that you
 follow Dr. Reid in the word “ SEEN ;” and do not evince
 the slightest distinction between SEEING and JUDGING)
 “ in the direction of a line drawn perpendicular to the
 “ retina from the point at which the ray upon it falls.
 “ Now, if from every point in every letter of the inverted
 “ words ΣΑΨΡΟΗ ΗΟΥΟΟ, as delineated in the retina,”
 (In other places, I have shewn, you call it “ *painted*,”
 which is an infinitely different thing from the *truth* that
 the impression is “ DELINEATED,)”—“ we draw lines
 “ perpendicular to the retina till they meet on the paper
 “ before the eye, to which its two axes are directed,
 “ their termination will actually depict the words COACH
 “ HORSES: Hence it follows that the preposterous posi-
 “ tion of the inverted images is absolutely necessary to
 “ their being reformed in virtue of the law of vision
 “ already mentioned.”

Now, by this single argument, (for you do not so much
 as hint at any second) you deem the whole edifice of Cere-
 bral Vision dissolved into thin air; and proceed calmly to
 the work of contempt. Here then I will, for the moment,
 absolve you from the tissue of mistakes already exposed,
 and will suppose we are looking, *agreeably with the EX-
 PRESS CONDITIONS of my 14th Proposition*, at a COACH
with the left eye, and its YOKED HORSES with the right
 eye,—the whole equipage looking toward our right side.
 The result of this will be that, if lines were produced out
 from the *inverted retinal impression* in the left eye, they
 would, (exactly as you say,) depict the word COACH *erect*
 on the paper: And a similar result would follow the word
 HORSES, depicted in the right eye. *But this result is*
as requisite on my scheme as on yours. And, now, mark
 the consequence. It is demanded by my scheme, as well
 as by yours, that the *rays of light* issue from the *erect*

word on the paper ; and, entering the pupil, cross over and prick an inverted impression of the word on the retina ; which, being RE-CROSSED behind the retina, must discharge itself ERECT upon the Sensorium, and this occasions an ERECT COLOR IMAGE of the word in the MIND. And, here, my account recognises the rays of light as a direct integral part of the visual chain. But your account involves the following absurdities : It does not recognise the rays of light as any part of the visual chain ; but only admits their collateral instrumentality ; because your bundle of crossed lines of direction, (in most cases,) does not pass through the pupil, but you imagine it as passing through the opaque sclerotic coat of the eye, which is a wall impervious to sight : and, when you have embraced this absurdity, What follows ?—this—that you have a real bundle of crossed rays of light, and an imaginary bundle of crossed lines of direction ; BOTH bundles lying, separately, side-by-side, like two XXs thus—rather inclined to one another, the one bundle (shall we say ?) serving as a sort of mirage to the other !

You taunted me with the “*philosophy of fools*” when, with a thrice-Calibanian simplicity, I took you for a god ! Will you, after this, maintain that Nature works her drama with the double set of puppets which you have assigned to her ? According to your Principle, we do not see *either* WITH, or FROM, or BY LIGHT ; but we see BY, or FROM, SOME FOREIGN WITCHERY, every time the Enchantress Light waves her wand. But I proceed to your farther refutation.

In order to rescue your principle from being as instructively, as it is certainly, wrecked here ; it would be requisite that we should see BOTH the words with *one* eye, or BOTH with *both* eyes ; both which cases are altogether in the face of the *conditions*. And, as the case is, it is certain from the laws of dioptrics that, *if the retinal impressions were not RE-CROSSED BEHIND the eyes*, we must see the word COACH not less

than an inch, or more, SEPARATE FROM the word HORSES. But this is not all the absurdity in question; For the two words, besides being so far apart, would not be arranged as—"ΣΕΣΘΗ ΗΟΥΟ;"—but they would be arranged so as to look at each other preposterously—thus —ΗΟΥΟ—ΣΕΣΘΗ—the back of the coach being turned toward the faces of the horses.—See the two half arrows, Plate I. in the Treatise.

To bring in, now, my *uncareful* examination of the phenomena of color images from pressures on the eyes; One of these phenomena, systematically described by me in the Treatise so contemned, is this: that, upon pressure on the outer side of each eye-ball, *simultaneously*, the Peacock's Feather caused by the pressure on the left eye, is seen about *an inch and a half* on the right side of the Peacock's Feather that is caused by the pressure on the right eye; *both being seen AT THE SAME INSTANT OF TIME, in the presence of each other.* And thus, the actual phenomena in the mind realise the truth of the dioptrical reasoning of my 14th Proposition: *which phenomena I was led to seek, and to detect, by experimenting in consequence of that very dioptrical reasoning.*

Will you, still, call this *stumbling?* Or, Will your ingenuousness demand still farther proofs?

You may discern, here, that the DIRECTION of the seen Feather is *not at all disputed by me*: The DIRECTION is, as you assert, in *that of the opposite point* of the eye-ball to that pressed. But *Direction* is one thing; and *Distance* is another and vastly different thing; and, I predict, you will never attempt to deny that the feather, *which you think belongs to and is situated on the opposite margin* of the one eye, is SEEN *over against the middle* of the other eye. NOW, altogether bowing to your great merit in some other departments of optics; I congratulate you upon our respective situations upon *that end of the optical chain which merges in LEGITIMATE PNEUMATOLOGICAL SCIENCE.*

No reader, of the least competence to the subject, can suppose that I have not a variety of other arguments, equally strong, to adduce. But, Why should I augment the mass, after those which I have here supplied, and when I am so pressed, both by time and limits? I shall merely add that, I think, you will not fall into a farther mistake, by supposing it to be an objection that the *coach and horses* are ACTUALLY SEEN CONNECTED; whereas, the *peacock's feathers* are SEEN SEPARATED. Because, the reason of this plainly is that, the *coach* and the *horses* are delineated upon parts of the two respective *retinæ* which cause them to MEET BEHIND THE EYES: Whereas, the *two pressures* are upon such *uncorresponding* parts of their respective *retinæ*, as make their two caused Feathers occupy *localities in the sensorium far apart* from each other. —And, now, Let the Optical world decide between us.

HEAD THIRD.

Your averment before the British Association.

If my prefixed address to the British Association be read a second time in this place; I may then proceed to the following statement.

In your *Journal of Science for August 1832*, you have a Paper of your own—"On the Effect of Compression and Dilation upon the Retina." And, in a note to that Paper, you say—"Read before the British Association at Oxford, June 22, 1832."

The Paper in question extends to *barely three full pages of your Journal*; although the interval of time, from June till August, might well be expected to have brought forth some additional matter to it. And, what is still more surprising, it consists for the greater part of observations on the remarks of Sir Isaac Newton, and of your own; so that you have recorded *only two results* of Pressures, both which you have distinguished by *italics*, in order to impress them the more upon notice; the *whole account of Pressures*, which led to these results, being

contained, the *first of them in seven lines*, and the *second in seventeen lines*; The particularity with which I have deemed it necessary to note this diminutiveness of your contribution to the subject, arises from the force of my astonishment at the fact. And I feel it requisite to pledge myself, to those who may not be able to consult your Journal, that the *whole course of pressures*, which you have thus laid before the first Scientific Association in the Country, *as the evidence of your being the Original and Precursor in the Province of Pressures on the Eyes*, extends no farther, nor deeper, than that which I have here reported.

It remains, therefore, that I adduce the evidence of your having proclaimed your right and title to the province in question. And this evidence consists in the leading paragraph of your Paper; which commences in the following terms:—

“THE production of light by a gentle pressure upon the eye-ball, or by a sudden stroke upon the eye, is a fact which has been long known, but which, so far as I know, has never been carefully examined.”

Now, by this single sentence you have, in the presence, and under the acquiescence of the British Association, shorn me clean of the latest, and in fact the most promising labor of my life; it being that upon which I had confidently built, as the engine whose force must break through the otherwise desperate obstruction, which a combination of circumstances had opposed to my whole literary life. This, undeniably, your averment has done *directly and immediately*. And, it is no less certain that it is an *act of continuation*, of that sweeping sentence by which, in your Journal for April 1831, you have ruined my credit and prospects. The act now in question, however, is the only one for consideration here: And, at the same time, it is manifest that the very terms of the passage now quoted convey your virtual acknowledgment that your present Paper contains your *first* contribution to the

subject; while your express acknowledgment of this will be presently had in evidence.

As the fact of my having been before you, in the province of *Vision from Pressures*, is thus placed beyond the reach of gainsay; it only remains for me to put the question, *as to whether, or not, my examination of the subject has been that which men of science, and of probity, will pronounce to have been* “CAREFUL.”

Here then, in the first place, I ask—Is there a man of optical science, and of name, who shall only read the “*Optical Investigation*,” expressed in the 29th and following pages of this Letter; and will then stand up, in the presence of the British Association, and affirm that *it was possible for any man to arrive at the Inclination, or even the Duality, of the Sensorial Tablets of Color Images*; or, yet, at the *other optical expositions* which I have given in the course of that investigation; *who had never gone through a careful course of pressures in the eyes*?

But, What will be judged when I state that you had, previously—in April 1832,—read and criticised the *Fifth Section* of my Treatise of Vision, containing thirty-two pages upon *Pressures*: which Section, besides referring to a course of *general pressures* executed twenty years before, contains that systematic account of pressures, with a PLATE, to which I have already referred in a former page of this Letter? And, What shall be farther judged when it is added that the Supplement on *Color Images*,—the substance of which was recognised by an Abstract printed by the Royal Society,—was published in *September 1831*,—nearly a year previously to your arrogation of Priority on this ground; in which Supplement, *besides the whole of its being the certain fruits of my previous Course of Pressures*, I have introduced some farther results of such pressures?

In the Third place; What will be the decision when I mention my Second Supplement, on “*The Sensorium investigated as to Figure by a Course of Pressures on the*

Eyes,” which was published in *April, 1832*—two months before your Paper was read—and in which is laid out the rationale of the *inclination of the Two Sensorial Tablets*, already described above?

If you shall say, that you did not know of the existence of those two Supplements when you wrote your paper; my answer is, that the substance of the first of them was *long before* acknowledged by the Royal Society, to which you belong: and that, besides this, it was not only announced in the METROPOLITAN; but also, most decisively as to the fact, (in succession,) by the SPECTATOR and the ATLAS Journals: And, Who can deny that you *ought* to have seen some of the several advertisements of the *Second Supplement*; especially as it was handsomely noticed in the METROPOLITAN, and the subject was one in which, it is proved, you were deeply interested?

But, I now proceed to adduce evidence of a vastly different complexion touching your foreknowledge of the existence of a “careful examination.” And here, therefore, I have to hope for the serious attention of the British Association. And, if you sink the nature and weight of this evidence, with the acquiescence of that honorable body; then, What have I farther to do with that World in whose service I have sacrificed health and life?

When any man writes with insincerity, upon the same subject at two different times; he would require to be either very talented, or very intent upon his purpose, to enable him to avoid inconsistency. In order, therefore, to shew whether this remark bears upon your proceeding, I in the *First* place observe that, in your strictures in question, there are various expressions which, I hope, may satisfy any critical eye that you did not think my labors, in any department, so utterly contemptible as your exterminating sentence has proclaimed them. *Secondly*, As a particular, and a very precious and critical example of this; I now quote the following commencement of one of the heads of your criticisms, page 366.

“The optical readers of this Journal will recollect that

“ we have had occasion to discuss the analogous subject
 “ of the vision of impressions on the retina. These im-
 “ pressions, however, were made with strong light on the
 “ retina, whereas Mr. Fearn has occupied himself princi-
 “ pally with the luminous circles produced by pressure on
 “ the eye-ball,” &c. Here you add—“ but he treats
 “ only of the direction in which they are seen.” *But, here I repeat, this is an enormous mis-statement of the fact,*
 though it cannot alter the case.

Here, then, we have your express declaration, not only that I was your *competitor*, (*though of course your successor*,) on the *general* ground of investigation of the results of *impressions of light on the interior of the retina*: But, in addition to this, we have also your express declaration that I was “ PRINCIPALLY ” your *predecessor and precursor on the ground of External Pressures on the Eye-ball*. And now, Let it be observed what is the tenor of this your express testimonial, *as far as regards the “ CARE,”* of my labor in this department. You say, — “ whereas Mr. Fearn has occupied himself PRINCIPALLY.” Thus, then, you acknowledge that my examination was so extensive as to involve a “ *principally* ;” which, manifestly, implies that it was *far* more extensive and careful than some other and secondary examination which I had also conducted on the subject. Now, Let any person in the subject answer the question: — Would you have expressly accorded your testimony, to such a competition on the subject, to any writer who had shewn himself to be *only a careless smatterer, or mere dabbler* in it? Would you, (with all your optical acquisitions and honors on your head, and not over given to humility in opposition, or in competition,) Would you have deigned to *describe, as in competition with yours*, any labors by the distinction of *principal*, if those labors had been undeserving the name of a *careful examination*? But, so the fact is, that you have expressly thus described my labors: And I desire not a tittle of farther evidence to complete my case.

Upon this, therefore, I appeal to the honor, the dignity, and the justice, of the British Association. And here, first, repeating your allegation in their presence in June, 1832, that, "SO FAR AS YOU KNOW, *the production of light by pressure on the eye-ball has never been carefully examined;*" I now most earnestly call upon their justice, that they will adjudge this case.*

In the instance of a certain investigation before a great Assembly, within memory, an individual of rank, in delivering his evidence, by some confusion of thought on the spur of the moment, expressed himself in terms which surprised all who heard him. What, then, did that Assembly deem it due to justice, and to their own honor, to order upon the occasion?—But that individual was not speaking as a member of the Assembly; he was only giving his evidence as a stranger: Whereas, you have expressed yourself, in the manner and extent above quoted, as a member of the British Association, in its presence and enjoying its confidence that none of its members, under that sanction, would approach an overstepping of a well-weighed and accurate allegation.—It is plain that no honorable member present could entertain a suspicion, that any labors existed which could cast the slightest cloud over the disk of your averment.

* In that allegation, you have *concealed from your hearers your hostility* to me, by concealing my labors and name. But, in your "Natural Magic," (page 48,) you have *again* given way to *another* burst, in avowal of it. — Speaking of "impressions on the retina;"—you add—"Here we reach the gulf which human intelligence cannot pass, and if the presumptuous mind of man shall dare to extend its speculations farther, it will do it only to evince its incapacity, and mortify its pride."—From this startling pitch of language, so foreign to the *general* tone of your amusing style, it is shewn that you can change, from the tone of *friendly advice*, to that of *disrecognition*; and again to the stern expression of *resentment*, as suits the occasion: And also shewn, that the spirit of ruin to my credit will not cease of its own accord.

The only question, however, which concerns your intention in this procedure, is, Under what impression did you express yourself? This is not for me to decide: On the contrary, it may be possible that the strength of prejudice may have deceived you: And it will be perfectly welcome to me, if you satisfy the world upon this head. All that I expect of right, and all that I wish is, that the British Association will publickly grant me reparation, by recognising my right to the prior and effective labor in the province of Vision from Pressure on the Eyes. And it is enough for me to urge here, for the justice of that Association, that, whether it shall be judged that the wrong was intentional, or unintentional, it is no less wrong, and ruin,—most certain ruin—to my credit in the scientific world: And that, I have been deprived of my labor, and my prospects, under the shield for the moment of the Association, by an act as unexpected by me as ever was crowned with success in the annals of literature.

Can I, then, fear I shall sink under such an act, now that I have raised my voice against it? Can I fear that the British Association, newly entered upon life, and blushing with the expectation of honor from all, will not deem its dignity involved in the matter: to which, if it listen not nor decide upon, I here respectfully submit, it will render itself a party to the act which it sanctions. If this is to be feared, and I yield up my life under the oppression now in evidence; every dust that is blown from my grave will fall on the lustre of the British Association.

N.B.—Witness my signature to these averments, in forty-eight pages.—Besides which, I claim part of Sir David Brewster's "TWO RESULTS," as my prior detection: And I dissent from other parts.

JOHN FEARN.

